

**PATENT APPLICATION**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of

Docket No: Q90861

Ji-hyun KIM, et al.

Appln. No.: 10/554,050

Group Art Unit: 1614

Confirmation No.: 8300

Examiner: Zohrek VAKILI

Filed: January 25, 2006

For: COMPOSITION FOR SLIMMING

**DECLARATION UNDER 37 C.F.R. § 1.132**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

1. I, KIM JIHYUN, hereby declare and state:
2. THAT I am a citizen of the Republic of Korea
3. THAT I have received the degree of Master in the year of 1998 from Kyoungbook University, Daegu, Korea;
4. THAT I have been employed by Amorepacific Corporation since June 1, 2000, where I hold a position as Senior researcher, with responsibility for evaluating anti-obesity materials and researching their mechanism for application of cosmetic slimming products and functional foods;
5. THAT myself and KIM *et al.*, are co-inventors of the inventions described in the specification and claimed in the above-identified application.

6. THAT I am familiar with the disclosure and claims of the above-identified patent application.
7. I am familiar with the prosecution of this application. I have reviewed the Office Action dated May 1, 2007, in the above-identified application wherein, *inter alia*, the Examiner rejects Claim 6 under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 7,202,222 to Ramazanov et al. ("Ramazanov"), U.S. Patent No. 6,669,952 to Waggle et al. ("Waggle"), and Graham (Prev. Med. 21(3): 334-350, May 1992; "Graham"). I have reviewed Ramazanov, Waggle, and Graham, and disagree with the Examiner's conclusion that Ramazanov, Waggle, and Graham, describes the embodiments of the claimed invention, for the reasons discussed below.
8. I also hereby declare that the results disclosed in the present application, which are reasonably defined by claim 6 of the above-identified application, are unexpected over the disclosure of Ramazanov, Waggle, and Graham. Specifically, the present application shows, unexpectedly, that the claimed composition has an anti-cellulite effect by inhibiting the differentiation of fat cells and accelerating fat decomposition, as compared to the individual components disclosed by Ramazanov, Waggle, and Graham.
9. Anti-cellulite Effect Of The Claimed Composition  
  
As shown in Figure 5 of the above-referenced application, the claimed anti-cellulite composition can cure cellulite generated due to enlarged fat cells to be elastic, firm, and smooth by decomposing and removing fats excessively accumulated in mature fat

cells. In contrast to other conventional methods or compositions employed that are focused only on one feature, i.e., differentiation of fat cells or acceleration of decomposition of fats, the claimed anti-cellulite composition has the unexpected effect of inhibiting the differentiation of fat cells and accelerating fat decomposition. The claimed anti-cellulite composition synergistically improves the decomposition of fats in already generated fat cells and completely removes the by-products of the decomposition to prevent re-accumulation of fats, and inhibits the differentiation of fat cells and accumulation of fats in fat cells, i.e., generation and enlargement of fat cells, by inhibiting glycerol-3-phosphate dehydrogenase (GPDH).

10. The decomposition of fat in fat cells treated with the claimed anti-cellulite composition is due to an increase in the expression of the  $\beta_3$ -adrenergic receptor, which accelerates decomposition of fats by hydrolyzing triglyceride to free fatty acid and glycerol.

11. The Claimed Composition Provides Superior Results Over The Compositions of Ramazanov, Waggle, and Graham

The claimed composition is substantially different from the components disclosed in Ramazanov, Waggle, and Graham, and provides unexpected and highly desirable results over the components disclosed in Ramazanov, Waggle, and Graham.


12. In contrast to the claimed anti-cellulite composition comprising theanine and at least one active ingredient selected from the group consisting of caffeine, genistein, L-carnitine, and catechin, each of the individual components disclosed by Ramazanov,

Waggle, and Graham showed less of a reduction in neutral fat (see Figure 4 of the specification). As demonstrated by Figure 4 of the present specification, the claimed composition has a synergistic anti-cellulite effect that inhibits accumulation of neutral fats, for instance, by hydrolyzing triglycerides to free fatty acids and glycerol. Hence, the claimed composition inhibits the generation and enlargement of fat cells by increasing the expression of  $\beta_3$ -adrenergic receptor or improving the expression of enzymes related to the decomposition or combustion of fats. In comparison with control, when 3T3-L1 (fat cells) was treated individually with theanine and catechin, the amount of neutral fat decreased. This effect was even more significant when theanine and catechin were combined as claimed in the present invention.

13. In addition, as demonstrated in Figure 5 of the present specification, the claimed composition shows a synergistic effect in improving the decomposition of fats in comparison to each of the individual components disclosed in Ramazanov, Waggle, and Graham. Figure 5 shows that the claimed composition significantly hydrolyzes more triglycerides to release glycerol than each of the individual components alone. The increase in free isolated glycerol in Figure 5 is an indication of enhanced fat decomposition by the claimed composition.
14. As demonstrated in Figure 5 of the specification, the synergistic effect of the claimed composition is not merely due to an increase in the amount of effective components, but due to the synergistic mechanisms of the components to both accelerate the decomposition or combustion of fat cells, and inhibit the differentiation of fat cells.

15. The improvement in skin firmness as observed by the naked eye for the claimed anti-cellulite composition is shown in Figure 7 of the specification.
16. Therefore, because the claimed anti-cellulite composition synergistically improves the mechanisms for decomposition of fats and for inhibiting the differentiation of fat cells by inhibiting GPDH, the claimed composition is substantially different from the individual components disclosed in Ramazanov, Waggle, and Graham.
17. I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: October 8, 2007

  
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KIM JIHYUN